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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/240,509	01/29/1999	HARI KALVA	AP31569	7416

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EXAMINER

PRIETO, BEATRIZ

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 11/06/2002

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/240,509

Applicant(s)

KALVA ET AL.

Examiner

B. PRIETO

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Detailed Action

1. This communication is in response to request for reconsideration filed 09/09/02, claims 1-14 remain pending.
2. Quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action may be found in previous office action.
3. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woods et. al. (Woods) Wired for Speed: Efficient Routes on VRML 2.0.

Regarding claims 8 and 1, Woods teaches features of invention substantially as claimed; Woods teaches a system/method supporting communicating command information between a VRL nodes for sending (source) and receiving (destination) data via routes (section 2.1-2.2), said nodes include a player VRML browser (client) (abstract), interactive communication between said nodes consisting of request-response model (section 2.3, i.e. client-server model) across a network (sections 2.2-2.3, client browser, configured to request data and receive arrival of requested data through a network) comprising:

generating (firing) a command message (command route) associated with a user action or system event associated with streams containing scene description information (e.g. scene source nodes, etc.), command message including a command (e.g. event fields, see sections 1.1-2.2, command routes, section 4.1 commands, i.e. execute fields), a command descriptor (integer identifier, see section 4.1), and one of a server route (command routes-rendering scene means, section 2.2-2.3) and a command node (execute event sink field i.e. command route node, see 2.1 and 4.1); wherein event source/sink routes support interaction between a source of the route and a destination of the route (see section 2.1, such as firing a "TimeSensor" node scene in the interaction VRML model, interactivity-model is request-response between a requesting source and a responding destination nodes, section 2.3); and

transmitting the command message upon occurrence of a user or system triggering event (e.g. Touchsensor node scene, see 2.1 section, user or system events, see 2.2, source/sink route, user or system triggering event, message (request) transmission, message (response) receipt,

using event source/sink routes, section 2.3, said messages to support said node scenes), however Woods teachings of a client node (Cosmo Player, as a VRML browser) and a provider node interacting with said supporting interactive communication (e.g. request/response or push/pull models of communication), as discussed above, is not explicitly denoted a “client” and “server” interaction; It would have been obvious to one ordinary skilled in the art at the time the invention was made to utilize Woods teachings to implement the server entity providing the same functionalities as claimed, motivation would be to provide a robust designing got efficient handling of network routes and events, as taught by Woods.

Regarding claims 2-3, however Woods does not explicitly teach wherein said the generating command message, discussed above is consistent with local interactivity model defined in MPEG-4. Admittance of prior art (MPEP § 2129) Applicant disclosure states: “MPEG-4 essentially uses two modes of interactivity: local and remote. Local interactivity can be fully implemented using the native event architecture of *MPEG-4 interactivity can be fully implemented using the native event architecture of MPEG-4 BIFS (Binary Format for Scenes)*, which is based on the VRML 2.0 ROUTEs design and documented in Part 1 of the MPEG-4 specification (Systems), see page 1, lines 26-33. It would have been obvious to one ordinary skilled in the art at the time the invention was made to utilize an interactivity model defined in MPEG-4, the new VRML 2.0 specification, enables much more dynamic and interactive environments supported by the convergence of these technologies; motivation would be to provide via MPEG-4 a real service on desktop application enhancing the tele-presence and shared virtual reality space technology (see Ref A included on previous office action).

Regarding claims 4-5, the triggering event is a mouse clicks and wherein the triggering event is a timer signal (Woods, see 2.1 section).

Regarding claims 6-7, command information is transmitted from the server to the client and wherein command information is transmitted from the client to the server (Woods, message between a provider node and a player VRML browser client node, request/response, see 2.1-2.3, request e.g. change state of current scene, response update and rendering requested scene)

Regarding claims 9-14, the claim comprise the system in accordance to the method disclosed on claims 1-7, respectively same rationale is applicable.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure; pertinence is presented in accordance with to MPEP§ 707.05. Copies of documents cited will be provided as set forth in MPEP§ 707.05(a):

Ref A: Using Java to interact with geo-referenced VRML within a Virtual Field Course, Moore, K.; Dykes, J.; Wood, J., Virtual Field Course, Department of Geography, June 1997, pages 1-12.

Moore et. al. teaches where VRML provides a standard language for describing interactive 3D objected and worlds delivered across the Internet, VRML is becoming a Web standard for VR delivery (page 3). VRML worlds are primarily defined by nodes that describe shapes, interpolators, sensors and scripts, linked by routes which pass messages between nodes, containing fields and events that describe their appearance and behavior and may be extended using prototypes and scripts (page 6). The VRML script nodes provide a general-purpose node for programming new sensors and interpolators, whereby the appearance and behavior of object in the scene are modified. The script node enables events and nodes to be passed from VRML to Java (EVENTIN), commands to be sent from a Java to VRML (Eventout). Event, such as mouse, cursor, and keyboard combinations can be sent from the VRML scene nodes where they are detected to Java program that react correspondingly, and conversely. See route commands associated with an URL (Figs. 3a-b).

Ref B: D7.2, Review of VRML and WWW Techniques, Coven-Collaborative virtual environments, April 1997, pages 1-33.

The paper mentioned above discloses a system/method supporting communicating command information between a VRL nodes for sending and receiving data via the use of sensors, interpolators, scripts and route commands, e.g. using a ROUTE statement which gives the names of the two nodes and the fields between which a connection is to be made, wherein nodes are usually named using DEF statements (see section 2.2.3), page 7. VRML is available using plug-in browser for Netscape and Internet Explorer, and editing tools such as CosmoWorlds from Silicon Graphics. VRML is envisaged to include a Binary encoding extension, conformance testing and External Authoring Interface (page 13). Said nodes include a player VRML client browser (page 14), interactive communication between said nodes consisting of request-response model by communicating events that occur within the local copy of the scene database to other participating browsers. The Script nodes require downloading the node along with the world, if they are not cached locally (sections 4.2.1-4.2.2). Fig. 4-1 illustrates Overview of the Living Worlds Architecture, wherein clients communicate across a network (sections 2.2-2.3, client browser, configured to request data and receive are, locally or remotely over the Internet (sections 4.2.2-4.2.3), wherein copies of the nodes can resides in each one of the networked application processes and propagated through sent over the network (section 4.2.3.2). Also disclosing the user of command route associated with a user action or system event associated with streams containing scene description information (e.g. scene source nodes, etc.), command message including a command (e.g. event fields) wherein event source/sink routes support interaction between a source of the route and a destination of the route "TimeSensor" or "Touchsensor" node scene.

Response to arguments

5. Applicant argues (A) prior art of record Woods discloses no interaction between a client and a server by transmitting generated commands messages upon occurrence of a triggering event, prior art does not teach providing interaction between “clients and servers” is not across a network.

6. In response to argument A, Woods teaches the use of event source/sink routes between VRML nodes for sending/receiving data; communication between nodes supports an interactive communication between said nodes by means of a *request-response model* (section 2.3, this is a “client” requester “server” provider interactive communication, push-pull models, i.e. client/server architecture, browser is configured to request data and receive data in response to said request, sections 2.2-2.3); wherein a Player-VRML (client) browser is configured with means for firing a generated a command message upon a *triggering system event* such as a *TimeSensor* or a *mouse click* (section 2.1); wherein the conceptual model of the message is request-response (section 2.3) and one of a server route (*command routes-rendering scene means*, section 2.2-2.3, see 2.2 *routes between source/destination nodes in the scene, generating user event in the scene, arrival of request data is a network generated event*); wherein event source/sink routes support interaction *between a source node of the route and a destination node* of the route message (see section 2.1), interactivity-model is request-response between a *requesting source and a responding destination*, section 2.3); update traversal includes a traversal of the VRML scene graph, during the traversal a node in the VRML scene graph is modified on demand and the data through from the network (see section 2.4); It is respectfully noted that according to applicant’s specifications “client” and “server” as defined by the specifications are entities, processes (specifications, page 2, lines 1-4), or applications, with sending/receiving capabilities, (see specifications, page 2, lines 18-23), a “network” is defined or exemplified according to applicant’s specification as a communication protocol, e.g. Internet communication protocol (IP) or an Asynchronous transfer mode (ATM) (see specification on page 8, lines 9-10, as indicated by applicant). It is noted that a client/server nodes

communicatively coupled via a network is not novel, it is taught by the prior art as indicated above, and does not place instant application in condition for allowance.

7. Applicants arguments filed 09/09/02 have been fully considered but not rendered persuasive.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prieto, B. whose telephone number is (703) 305-0750. The Examiner can normally be reached on Monday-Friday from 6:00 to 3:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Mark H. Rinehart can be reached on (703) 305-4815. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-6606. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or Faxed to:

(703) 746-7239, for Official communications and entry


Or:

(703) 746-7240, for Non-Official or draft communications, please label
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Or Telephone:

(703) 306-5631 for TC 2100 Customer Service Office.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Fourth Floor (Receptionist), further ensuring that a receipt is provided stamped "TC 2100".


B. Prieto
GAU 2142/TC 2100
Patent Examiner
October 23, 2002



MARK H. RINEHART
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